ELSEVIER

Volume 307, Numbers 1–2, 14 July 2000

Journal of ALLOYS AND COMPOUNDS

www.elsevier.com/locate/jallcom

Contents

Letter

A high pressure observation of the Mg_2NiH_4–H system L1
J. Chen, T. Sakai, N. Kitamura, H. Tanaka, H.T. Takeshita, N. Kuriyama, D. Harimoto, H. Nagai (Osaka, Japan) and Y. Fukai (Tokyo, Japan)

Physics

Evaluation of thermal properties of mixed oxide fuel by molecular dynamics 1
K. Yamada, K. Kurosaki, M. Uno and S. Yamanaka (Osaka, Japan)

Evaluation of thermal properties of uranium dioxide by molecular dynamics 10
K. Yamada, K. Kurosaki, M. Uno and S. Yamanaka (Osaka, Japan)

Distributions of the hyperfine interaction parameters in $(Er_{1-x}Sm_x)_2Fe_{14}B$ as seen by Mössbauer spectroscopy 17
J.J. Bara, B.F. Bogacz and A.T. Pędziwiatr (Cracow, Poland)

Magnetic behaviors of $Pr_{1-x}Nd_xTiO_3$ $(0 \leq x \leq 1)$ 25
K. Yoshii (Hyogo, Japan), A. Nakamura and H. Abe (Ibaraki, Japan)

Formation, crystal structure and magnetism of ternary compounds Ce_5MGe_2 (M=Co, Ni, Ru, Rh, Pd, Ir, Pt) 31
O.L. Sologub (Thiais, France), P. Salamakha (Thiais, France and Sacavèm, Portugal) and C. Godart (Thiais, France)

New structure type of ternary intermetallic borides $CePt_2B$ 40
O. Sologub (Thiais, France), P. Salamakha (Thiais, France and Sacavèm, Portugal), H. Noël, M. Potel (Rennes, France), M. Almeida (Sacavèm, Portugal) and C. Godart (Thiais, France)

Hyperfine interactions and crystal site occupancies in $RTiFe_{11-x}Co_x$ (R=Y, Dy and Er) as seen by Mössbauer spectroscopy . . 45
J.J. Bara, B.F. Bogacz, A.T. Pedziwiatr and R. Wielgosz (Cracow, Poland)

Magnetic anisotropy evolution of $(Ce,Y)_2Co_{17}$ compounds 51
L. Zhang (Guangzhou, China and Amsterdam, The Netherlands), O. Tegusi (Amsterdam, The Netherlands), Z.Y. Liu (Guangzhou, China), J.C.P. Klaasse, E. Brück, F.R. de Boer and K.H.J. Buschow (Amsterdam, The Netherlands)

Spin–glass transition in annealed $Y_6(Mn_{1-x}Fe_x)_{23}$ compounds 56
M. Ohta, A. Fujita and K. Fukamichi (Sendai, Japan)

Calculated variation trends across the actinide dioxide series: electronic structure and charge transfer transitions 61
S. Xia (Hefei, PR China) and J.C. Krupa (Orsay, France)

Magnetic order and crystal fields in the *Pnma* phases of Tm_2BaTO_5 (T=Co and Ni) 70
S.J. Harker, G.A. Stewart (Delft, The Netherlands) and P.C.M. Gubbens (Canberra, Australia)

Onset of ferromagnetism in the 5*f*-band metamagnet UCoAl upon partial dilution of the U sublattice 77
A.V. Andreev, V. Sechovský, D. Rafaja, L. Dobiášová (Prague, Czech Republic), Y. Homma and Y. Shiokawa (Sendai, Japan)

Optical properties of Sm^{3+} ions in lithium borate and lithium fluoroborate glasses 82
C.K. Jayasankar and P. Babu (Tirupati, India)

Pressure-induced structural transition in intermetallic compounds MnRhP and MnRhAs 96
T. Eto, M. Yamagishi, M. Ishizuka, S. Endo (Osaka, Japan), T. Ashida (Hiroshima, Japan), T. Kanomata (Miyagi, Japan), T. Kikegawa (Ibaraki, Japan) and R. Zach (Osaka, Japan)

Chemistry

Crystal structure and magnetic properties of $CeTe_2$ 101
K. Stöwe (Saarland, Germany)

Crystal structure of $Tm_2Ni_{12}P_7$ 111
T.P. Braun and F.J. DiSalvo (Ithaca, NY, USA)

Elsevier Science S.A.

Structural and thermal studies on $PuTe_2O_6$ . . . 114
K. Krishnan, K.D.S. Mudher and V. Venugopal (Mumbai, India)

Structural and magnetic properties of the perovskites $Sr_{n+1}(Co_{0.5}Nb_{0.5})_nO_{3n+1}$ ($n=\infty$, 2 and 1) . . . 119
K. Yoshii (Hyogo, Japan)

Crystal structure of the $Cu_2CdSn_3S_8$ compound . . . 124
S.I. Chykhrij (L'viv, Ukraine), L.V. Sysa, O.V. Parasyuk and L.V. Piskach (Lutsk, Ukraine)

Synthesis and crystal structure of Eu_2ReO_5, a complex oxide with Re–Re pairs in a tetragonal antiprismatic coordination . . . 127
C. Mujica, D. Gutiérrez, J. Llanos (Antofagasta, Chile) and R. Cardoso (Dresden, Germany)

Studies of X-ray amorphous phase in mechanochemical synthesis of iron silicides from elements . . . 131
G.V. Golubkova, O.I. Lomovsky, A.A. Vlasov, L.S. Davlitova, E.Yu. Belyaev and V.V. Malakhov (Novosibirsk, Russia)

Synthesis, characterization and luminescent properties of terbium and europium complexes with ligands from DTPA and pAS . 137
Y.J. Zhang (Shijiazhuang, China), Y. Chen, Q.D. Liu, X.G. Wang, J.R. Li and H. Liu (Beijing, China)

Reassessing the compound $CeCd_6$: the structure of Ce_6Cd_{37} . . . 141
M. Armbrüster and S. Lidin (Stockholm, Sweden)

The A-site deficient ordered perovskite $Th_{0.25}\square_{0.75}NbO_3$: a re-investigation . . . 149
A.R. Chakhmouradian, R.H. Mitchell (Thunder Bay, Canada) and P.C. Burns (Note Dame, IN, USA)

Lithium–beryllium hydrides: the lightest reversible metal hydrides . . . 157
A. Zaluska, L. Zaluski and J.O. Ström-Olsen (Montréal, Canada)

Enthalpy of formation for CoGe, CoSn, $Ni_{3.14}Sn_4$, $Ni_{3.50}Sn_4$, $AuCo_{1.66}Sn_4$, $AuNi_2Sn_4$ and $Au_{1.17}Pt_{1.82}Sn_4$ . . . 167
A.N. Torgersen (Oslo, Norway), H. Bros, R. Castanet (Marseille, France) and A. Kjekshus (Oslo, Norway)

The ternary system Au–Mn–Sn . . . 174
L. Offernes, A.N. Torgersen and A. Kjekshus (Oslo, Norway)

Iron(II) djenkolate: synthesis and properties . . . 179
P. Melnikov (C. Grande, Brazil), P.P. Corbi (Araraquara, Brazil), C. Diaz Aguila (La Habana, Cuba), M.A. Zacharias, M. Cavicchioli and A.C. Massabni (Araraquara, Brazil)

Concerning the transformations of Ti_3Ir alloy during high-energy ball-milling . . . 184
V.P. Balema, A.O. Pecharsky and V.K. Pecharsky (Ames, IA, USA)

Metallurgy

Review article

Enthalpies of dissolution of elements in liquid tin. I. Copper, silver and gold and rare earth metals . . . 191
A. Yassin (Baghdad, Iraq) and R. Castanet (Marseille, France)

Phase relationships in the Al–Ti–Ho system at 773 K . . . 199
H. Jinli, L. Jianlie, Z. Huaiying, Z. Yinghong and Y. Jialin (Guangxi, PR China)

On thermodynamic assessment of the Ag–Pr system . . . 202
F. Yin, X. Su, Z. Li, P. Zhang, M. Huang and Y. Shi (Hunan, China)

Single crystal refinements of TbTiGe, GdTiGe and $TbTi_{0.85}Mo_{0.15}Ge$ with CeFeSi- and CeScSi-type structures . . . 207
R. Welter (Vandoeuvre les Nancy, France), A.V. Morozkin (Moscow, Russia), V. Klosek, A. Vernière and B. Malaman (Vandoeuvre les Nancy, France)

Subsolidus phase relations in the Co-rich region of the La–Co–Ti system . . . 212
Q.L. Liu, J.J. Nan (Beijing, PR China), J.K. Liang (Beijing and Shenyang, PR China), F. Huang, Y. Chen, G.H. Rao and X.L. Chen (Beijing, PR China)

Crystal structure of the NdZnSi, $NdZn_{0.3}Si_{1.7}$ and NdZnSn ternary compounds . . . 215
P. Demchenko and O. Bodak (L'viv, Ukraine)

Compounds $Dy_3Ag_{2.3}Al_{8.7}$, $Ho_3Ag_{2.1}Al_{8.9}$, $Dy_3Cu_{2.6}Al_{8.4}$ and $Ho_3Cu_{2.4}Al_{8.6}$ as new representatives of the La_3Al_{11}-type structure . . . 218
B.M. Stel'makhovych, R.V. Gumeniuk and Yu.B. Kuz'ma (Lviv, Ukraine)

Phase equilibria and crystal structure of compounds in the Fe–Zn–Sb system at 570 K . . . 223
I.V. Chumak, V.V. Pavlyuk, G.S. Dmytriv (Lviv, Ukraine) and J. Stępień-Damm (Wroclaw, Poland)

Materials Science

Effect of carbon-containing compounds on the hydriding behavior of nanocrystalline Mg_2Ni 226
S. Bouaricha, J.P. Dodelet, D. Guay, J. Huot, S. Boily and R. Schulz (Québec, Canada)

Magnetic properties of interstitial modified $Pr_3(Fe,Ti)_{29}$ hydrocarbide 234
V. Psycharis, M. Gjoka (Attiki, Greece), O. Kalogirou (Thessaloniki, Greece), D. Niarchos (Attiki, Greece), V. Papaefthymiou (Ioannina, Greece) and Ch. Christodoulou (Lythragomis, Cyprus)

Electrochemical characteristics of Al-substituted Mg_2Ni As negative electrode 240
X. Jianshe, L. Guoxun, H. Yaoqin, D. Jun, W. Chaoqun and H. Guangyong (Beijing, PR China)

The structure of a PWO:La^{3+} crystal 245
Q. Lin, X. Feng and J. Chen (Shanghai, PR China)

Formation of titanium nitrides via wet reaction ball milling 249
F. Zhang (Singapore, Singapore), W.A. Kaczmarek (Canberra, Australia), L. Lu and M.O. Lai (Singapore, Singapore)

Synthesis and characteristics of consolidated nanocrystalline two-phase $Ag_{50}Ni_{50}$ alloy by hot pressing 254
Z.L. Zhao, Y. Zhao, Y. Niu, C.L. Wang and W.T. Wu (Shenyang, PR China)

Hydrogenation of TiFe by high-energy ball milling 259
C.-H. Chiang, Z.-H. Chin and T.-P. Perng (Hsinchu, Taiwan)

Preparation and hydrogenation of multicomponent AB_2-type Zr–Mn–V–Co–Ni amorphous alloy 266
L.-C. Lai, C.-L. Lee and T.-P. Perng (Hsinchu, Taiwan)

Vertical Bridgman growth and morphology study of $Ga_{1-x}Fe_xSb$, a new diluted magnetic semiconductor 272
N. Karar, S. Basu (Kharagpur, India) and S.R. Sainkar (Puna, India)

Hydrogen storage properties of amorphous and nanocrystalline $MmNi_{4.2}Al_{0.8}$ alloys 279
M. Jurczyk (Poznań, Poland)

Hydrogen storage characteristics of magnesium mechanically alloyed with $YNi_{5-x}Al_x$ (x=0, 1 and 3) intermetallics 283
M. Khrussanova (Sofia, Bulgaria), J.-L. Bobet (Pessac, France), M. Terzieva (Sofia, Bulgaria), B. Chevalier (Pessac, France), D. Radev, P. Peshev (Sofia, Bulgaria) and B. Darriet (Pessac, France)

The electronic and electrochemical properties of the $LaNi_5$, $LaNi_4Al$ and $LaNi_3AlCo$ systems 290
A. Szajek, M. Jurczyk and W. Rajewski (Poznań, Poland)

The influence of decrepitation on the diffusion kinetics of hydrogen in Nd–Fe–B 297
P. Liszkowski (Katowice, Poland), K. Turek and H. Figiel (Kraków, Poland)

Effect of Fe addition on hydrogen storage characteristics of $Ti_{0.16}Zr_{0.05}Cr_{0.22}V_{0.57}$ alloy 304
S.-W. Cho (Tokyo and Ibaraki, Japan), H. Enoki and E. Akiba (Ibaraki, Japan)

A magnetic study of the reversion of martensite α' in a 304 stainless steel 311
S.S.M. Tavares (Niteroi, Brazil and Grenoble, France), D. Fruchart and S. Miraglia (Grenoble, France)

Effect of various alloying elements on the martensitic transformation in Zr–0.8 Sn alloy 318
Y.M. Oh (Seoul, South Korea), Y.H. Jeong (Taejon, North Korea), K.J. Lee and S.J. Kim (Seoul, South Korea)

The surface structure and the electrochemical properties of hydrogen-absorbing alloys treated with an HCl aqueous solution . . 324
T. Ise, T. Murata, Y. Hirota, T. Imoto, M. Nogami and S. Nakahori (Tokushima, Japan)

Variation of hydriding kinetic properties in massive samples of the $LaAl_xNi_{5-x}$ system as a function of the Al content 333
M. Bereznitsky, J. Bloch, M.H. Mintz and I. Jacob (Beer Sheva, Israel)

Author Index of Volume 307 339

Subject Index of Volume 307 341

Keyword list